

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Rec'd PCT/PTO 02 MAR 2004  
PCT/EP2003/009794



Applicant's or agent's file reference PCT 46/003 Bo	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/009794	International filing date (day/month/year) 04 September 2003 (04.09.2003)	Priority date (day/month/year) 05 September 2002 (05.09.2002)
International Patent Classification (IPC) or national classification and IPC B01J 23/92, 38/60		
Applicant ENVICA GMBH		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 3 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 07 February 2004 (07.02.2004)	Date of completion of this report 04 November 2004 (04.11.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/009794

## I. Basis of the report

## 1. With regard to the elements of the international application:\*

- ☐ the international application as originally filed
- ☒ the description:  
pages \_\_\_\_\_ 1-10 \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☒ the claims:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, as amended (together with any statement under Article 19  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_ 1-14 \_\_\_\_\_, filed with the letter of \_\_\_\_\_ 17 June 2004 (17.06.2004)
- ☐ the drawings:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/fig \_\_\_\_\_

5. ☒ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.  
PCT/EP 03/09794

I. Basis of the report

1. This report has been drawn on the basis of *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.)*:

1. The amendments submitted with the letter of 17 June 2004 introduce substantive matter which, contrary to PCT Article 34(2)(b), goes beyond the disclosure in the international application as filed. The amendments are as follows: use of isoascorbic acid as per claim 3.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

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## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims	3-5, 9-11	YES
	Claims	1, 2, 6-8, 12-14	NO
Inventive step (IS)	Claims		YES
	Claims	3-5, 9-11	NO
Industrial applicability (IA)	Claims	1-14	YES
	Claims		NO

### 2. Citations and explanations

#### 1. Reference is made to the following documents:

D1: JP-A-10156192 & Derwent WPI abstract (AN: 1998-391666)

D2: US-A1-2001006929

D3: US-A-4615991

The details of D1 are based on a computerized translation.

#### 2. Novelty (PCT Article 33(2))

2.1 D1 describes a process for regenerating deNOx catalytic converters in which the catalytic converter is treated with a citric acid- and sulphuric acid-containing solution (paragraph [0022]). Citric acid is a hydroxycarboxylic acid.

The process according to claim 1 is therefore not novel over D1.

3. Dependent claims 2-14 do not appear to contain any additional features which could substantiate novelty and/or inventive step.

In particular, the additional features of dependent claims 6 (paragraph [0024]), 7-8 (paragraph [0030]), 12 (paragraph [0020]) and 13 (paragraph [0031]) are likewise known from D1. Further, a person skilled in the art knows other reducing agents and would therefore substitute other substances for citric acid without being inventive. Note that it does not follow from the application that the selection of, for example, ascorbic acid as a reducing agent yields a special technical effect.

Further, D2 describes the use of surfactants (paragraphs [0014] and [0015]) and treatment with ultrasound (paragraph [0019]). D2 relates to a regenerating process comprising washing with acids, wherein the washing solution may contain oxidizing or reducing additives (paragraph [0018]). The washing solution also contains catalytically active metal compounds. D1 also refers to the post-impregnation required as per the prior art (paragraph [0038]).

4. D3 (claims 1 and 2) describes the regeneration of deNOx catalytic converters by treating them with an oxalic acid solution. Oxalic acid likewise represents a reducing agent. Since it is not apparent that a special effect is achieved by selecting any hydroxycarboxylic acid as a reducing agent instead of oxalic acid, the subject matter of at least independent claim 1 does not involve an inventive step over D3 (PCT Article 33(3)).